this tissue, a theory which, we need hardly point out, is fully consistent with the view of Prof. Sachs, that the phloem may also be the seat of proteid-formation."—R.

BRIEFER ARTICLES.

Pentstemon Haydeni, n. sp.—Of the *Genuini* group: a foot or two high, glabrous, the stems decumbent, simple or branching, very leafy: cauline leaves, linear-lanceolate to linear, entire, 3 to 5 inches long by 1 to 3 lines broad, sessile and clasping: inflorescence a compactly crowded thyrse, the floral bracts from ovate-lanceolate and long-acuminate to ovate and acute, nearly equaling or the lower much exceeding the flowers; peduncles none or short: calyx-lobes acuminate, 3 to 5 lines long: corolla an inch long or more, the throat broadly dilated and the limb nearly equally lobed: sterile filament, bearded near the summit: capsule equaling the calyx.

This plant was first collected by Dr. F. V. Hayden, in the Laramie mountains of Wyoming, during some one of his early surveys, without flowers or fruit, and was referred by Dr. Gray to *P. acuminatus* as a form with linear cauline leaves. It was rediscovered during the past season, in flower and fruit, by Mr. H. L. Webber, of the Shaw School of Botany, on the Dismal River in Thomas county, Nebraska, about a hundred miles west of the 100th meridian. It has nearly the habit of the more conspicuously cordate-bracted forms of *P. acuminatus*, but with an extreme of discrepancy between the cauline leaves and floral bracts. The flowers are much larger and the throat of the corolla more dilated.—SERENO WATSON, *Cambridge, Mass.*

A remarkable orange tree.—There is in the herbarium of Brown University a specimen which is something of a curiosity. It was sent us last spring by Mr. Rowland Hazard, one of our trustees, from Santa Barbara, Cal. I quote from his letter of transmission.

"It is an orange tree which for years has lived and borne fruit without bark for a space of over seven inches entirely round the tree. I first saw this tree in February, 1885. It had been injured by a fire about three years before. When I saw it first it had a number of ripe oranges on it and in March it bloomed and bore fruit in the fall. The trunk was in substantially the same condition as you now see it. There was a space just above the ground where there was no bark and the sap-wood had rotted away, leaving only the heart-wood as the

connection with the root. I bought the place on which the tree was, in 1885. The tree has borne and ripened oranges every year till 1890. In 1889 a sprout came up from the root. This proved to be a Chinese lemon on which the orange had been grafted. I was not here in 1889. When I arrived in the fall of 1890 I saw that shoots from the orange had been sent out the preceding spring but they had withered and died. The Chinese lemon was very thrifty and full of fruit. It evidently had taken the sap. The struggle was over and the orange was dead. I send you the whole of it with a part of the Chinese lemon shoot. I think it should be preserved, as it is proof positive of the circulation of sap through the heart-wood. It lived, blossomed and bore fruit every year for at least seven years, when there was no connection between the tree and the root, except the heart-wood."—W. WHITMAN BAILEY, *Brown University.*

Helianthus mollis.—Plants which I collected near Odin, Illinois, years ago, and plants from Tennesseee, sent by my friend, Dr. Gattinger, were blooming in my garden the past year. The Tennessee plants flower two weeks before the others, have involucral bracts double the length, and the leaves one-fourth broader, though no longer. The leaves of the Illinois plants are so thick that the nerves can scarcely be seen; the nerves of the other are strongly visible, and there are some other differences.

In these days variations of this character are scarcely worth special note. We find similar variations with any plant in areas of but a few acres in extent if carefully looked for.

In the Illinois plants I have noted that all the first flowers faced the southeast, the first day of opening. This season they all faced the northwest. I might settle the whole story by merely saying, "something in the environment must have influenced all these variations;" but to my mind the term "environment," so frequently used in connection with similar phenomena, is utterly meaningless. It is, however, clear that there are often separate lines of variation in widely separated localities. Sometimes I think we might solve the problem sooner if we were not so easily satisfied with the word "environment." THOMAS MEEHAN, *Germantown, Philadelphia.*

Further notes on the mutilation of flowers by insects.— In the GAZETTE for 1888, p. 39, I state that *Bombus pennsylvanicus* slits the corolla tube to obtain the nectar from *Physostegia Virginiana* and *Mertensia Virginica*. There was a mistake made in copying the name of the insect from the original notes; it should read *Xylocopa virginica*, the Virginia carpenter bee. Since the above mentioned note was pub-